

FLIGHT

The
AIRCRAFT
ENGINEER
&
AIRSHIPS

First Aero Weekly in the World

Founder and Editor: STANLEY SPOONER

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CONTENTS

	PAGE
Editorial Comment	
A Great British Flight	333
Round-Germany Flight	334
London-Zurich	335
The Round-Germany Flight	336
Aeronautical Research Committee Reports	345
Personals	346
Royal Air Force	347
R.A.F. Intelligence	347
In Parliament	347
Correspondence	348
Side-Winds	348

EDITORIAL COMMENT.



CCURRING as it did at a time when the eyes of the world, or, at any rate, of the aeronautical world, are fixed on the Round-Germany competition, the splendid flight made by Alan J. Cobham, on May 29 from London to Zurich and back in a day on the little de Havilland "Moth," with Aircraft Disposal Company "Cirrus" engine, is an extremely welcome demonstration of the qualities of British aircraft and engines. While we have nothing but praise for many of the engines, machines and pilots taking part in the great German competition, it is gratifying to find that we have in this country machines and engines of no greater power which are capable, not only of equalling the best German performances, but of actually excelling them. The total distance covered by Cobham in his splendid flight was considerably greater than the total length of the first circuit in the Round-Germany competition, and the non-stop flight to Zurich, of 500 miles, was, of course, very much in excess of the longest stage in the German circuit.

It is, of course, well known, although the de Havilland "Moth" is not regarded as a light 'plane in the sense in which the term has come to be understood in this country, it has been sanctioned by the Air Ministry for use by the newly-formed light 'plane clubs, and Cobham's great flight should serve to demonstrate to those clubs which have decided to adopt this type that when they take delivery of their machines they will have low power aeroplanes of thoroughly reliable qualities and capable of very hard work.

The "Cirrus" engine used by Cobham develops about 65 h.p. only, but the great advantage of the type, to our way of thinking, is that : is power is developed at a relatively low speed of revolution. This means of course, that reciprocating parts are not so highly stressed as in the case of more "refined" engines, with consequent gain in reliability and long

DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list :—

1925

- June 6 Visit to Croydon Aerodrome, by I.Ae.E.
- June 7 Gordon Bennett Balloon Race, Brussels.
- June 12 Entries close for King's Cup Race.
- June 23 Independent Force (R.A.F.) Re-Union Dinner, R.A.F. Club, 7.45 p.m.
- June 25 Aero Golfing Soc. Match, Mid-Surrey.
- June 27 Royal Air Force Pageant, Hendon.
- June 27 R.A.F. Iraq Dinner, Holborn Restaurant, at 8.15 p.m.
- July 8-4 King's Cup Race.
- July 26-Aug. 9 Vauville Light 'Plane and Glider Meeting.
- Aug. 1-3 Royal Aero Club Race Meeting at Lympne.
- Sept. 19-28 F.I.A. Conference at Prague.
- Oct. 8 Aero Golfing Soc. Autumn Meeting, Walton Heath.
- Oct. 24-29 Schneider Cup Race, Baltimore, U.S.A.

1926

- Aug. Light Aeroplane Competition.

life. Incidentally, even on fairly slow machines good propeller efficiency is obtained without the use of gearing, and experience up to the present seems to show that the introduction of gearing has a tendency to lower the reliability of a small engine. Altogether, the flight is an extremely creditable one, of which all concerned may justly be proud, and Mr. Cobham, the Havilland Aircraft Company and the Aircraft Disposal Company deserve the thanks of all interested in British Aviation for the proof of British reliability which they have just given in such a thoroughly convincing manner.

Round-Germany Flight

In this issue of FLIGHT we give some impressions of the organisation and start for the first circuit in the great flight around Germany which is at present taking place. As the competition has not yet finished, it is impossible to attempt to forecast what the results may be, and the mishaps and delays to certain of the machines in the first circuit do not necessarily mean that these machines will not do well on the whole, since it is, of course, quite possible that a machine might have a good deal of trouble during the first two or three circuits, and yet do so well in the last three circuits as to secure a leading position. On the other hand, the flights are of such a difficult character that the wear and tear of engines and machines will necessarily tend to lower the reliability towards the end of the flying week, so that there is at least a probability that those competitors who do well at the beginning will be in a more favourable position than those who have a lot of lee-way to make up.

With regard to the machines themselves space does not permit this week of a detailed reference to many of the types of which particulars were not available last week, but it is hoped to return to these in our next issue. In the meantime it is interesting to observe that, among smaller machines at any rate, the biplane seems to be coming into its own again. The success which some years ago attended the gliders in the Rhön hills focussed attention on the monoplane of the greatest possible aerodynamical efficiency, and for a time it seemed that in the low-power class of machines the monoplane would be the type to develop. Experience has, however, shown that for the same strength the monoplane, especially the cantilever or semi-cantilever form so popular in Germany, works out rather heavily, and that what is gained in efficiency is likely to be lost in weight. Theoretical considerations might have indicated that this would be the case, but it is, perhaps, not always realised that in gliders weight does not matter, whereas as soon as one comes to a power-driven machine weight matters very much indeed, mainly as affecting the rate of climb of a machine.

We discussed this question of monoplane versus biplane with several German authorities, and learned that apparently the Germans have been having a good deal of trouble with their monoplanes, structural failures having occurred in several instances when

the monoplane type of machine was "stunted." The result seems to have been that many pilots have come to rather distrust the monoplane for this reason, and we noticed several monoplanes in which a note inside the pilot's cockpit stated that it was forbidden to "stunt" the machine or to dive it at more than a certain specified speed. All these considerations are turning the scales rather in favour of the biplane, and in the Round-Germany competition quite a surprisingly large percentage of the machines are of the biplane type.

Wood is still the material most widely used in the construction of German machines, but many examples of mixed construction were to be seen, usually with steel tube fuselages and wooden wings. Some of the L.F.G. machines are of all-metal construction, it is true, but as these had not arrived in Berlin in time for the start, they will not, presumably, be permitted to take part even if they should arrive later. There was, therefore, no opportunity of examining them so that we are unable to express an opinion as to the merits or otherwise of their construction. The Junkers machines are, of course, all-duralumin structures. The general standard of workmanship in the German machines did not impress one as being extraordinarily high, but, on the other hand, there were very few of which it could be said that the construction was really poor.

One outstanding feature of the competition, or rather of the start of the first circuit, was the extraordinary public interest taken in it. In spite of the fact that the start took place at 4 o'clock in the morning thousands of Berliners visited the aerodrome by that hour, and the majority appeared to spend the whole day there, waiting for the return of some of the faster machines. In this country of late years there has been relatively little public enthusiasm in aviation events, with the exception of the Aerial Pageant, which always attracts a great number of visitors. The Pageant is, however, of a character which no private flying meeting could hope to equal, and it is curious to speculate upon what the good Berliners would say could they be given an opportunity of seeing one of our aerial pageants. A very mild attempt aerially was made at amusing the crowds at Berlin on Sunday, and in spite of the uninteresting character of the performances the multitudes appear to have been vastly thrilled. What they would feel could they see a British squadron looping, rolling and spinning in perfect formation it is impossible to surmise.

Generally speaking, the organisation of the Round-Germany flight appears to be excellent, but it is evident that even Germans cannot hope, in practice, to attain perfection. Thus the apparent confusion at the start was far from being in keeping with the theoretical procedure by which machines of Class A were to start at 4 a.m., of Class B at 4.30 a.m., and of Class C at 5 a.m. As far as could be ascertained the orderly start that had been planned very soon degenerated into pilots getting away whenever they were ready, irrespective of their class-time.

Italian Flight to Australia

COL. M. DI PINEDO, Chief of Air Staff in Italy, has succeeded in reaching Australia, from Rome, in his S.16 ter flying boat, accompanied by his mechanic Campanelli. Continuing his flight from Batavia, he reached Surabaya, Java, on May 27. His next stage to Sumbawa Island was completed

the following day. Kupang was reached on May 29, and on May 31 he arrived at Broome, Western Australia. He has received messages of congratulation from Sig. Mussolini and Mr. Bruce. On Monday, June 1, he started off again for Melbourne, and up to the time of writing he has reached Carnarvon.

LONDON-ZURICH AND BACK ON A LIGHT 'PLANE

Alan Cobham's Fine Performance on a D.H. "Moth"

ROUGHLY 1,000 miles in one day on a De Havilland "Moth" light 'plane, fitted with a 60 h.p. A.D.C. "Cirrus" engine, is Alan Cobham's latest exploit. Since Bert Hinkler flew about 700 miles non-stop from London to Turin on the Avro "Baby" (35 h.p. Green) in 1920 and 800 miles non-stop from Sydney (N.S.W.) to Bundaberg (Queensland) in 1921, on a similar machine, this flight of Cobham's is undoubtedly one of the most important achievements made in the progress of low power aviation.

The importance of this flight lies in the fact that it has demonstrated the real possibilities of the light 'plane in a practical way, and has shown that it is possible for the "man-in-the-street" to fly—not merely short flights in or around an aerodrome, but comparatively long distances to foreign countries—with ease, safety and at a reasonable cost. It has, also, once again emphasised the reliability of British aircraft and aero engines, whatever the type may be.

On May 29, at 4.54 a.m., Alan Cobham took off from Croydon aerodrome in the "Moth"—which, by the way, had already some 5,000 miles to its credit—and with a stiffish cross-wind blowing, made for Lympne. Arriving over Lympne he circled overhead once or twice in order to make sure that he was observed (the machine was not fitted with wireless) and crossing the channel repeated this performance over St. Inglevert.

He then set a direct compass course for Basel, and proceeded in a dead straight line at a little over 80 m.p.h. The route first lay over the old Flanders battlefield—Arras, Cambrai, St. Quentin and the forest of the Ardennes, which still bore traces of the ravages of war.

After this, passing Toul and Epinal, Cobham just managed to get over the Vosges mountains, which were enveloped in heavy clouds. This safely accomplished, he passed over Mulhouse, then Basel and at 11 a.m. he landed at Zurich, having covered the 500 miles or so in 6 hours 6 mins. at an average speed of over 80 m.p.h. At Zurich he met with a splendid reception from the military officials and others, and after a stay of three-quarters of an hour, during which he had a light lunch, he started off on the return journey at 11.45 a.m.

The flight home was a much tougher proposition for now he had a stiff three-quarter head wind, which necessitated flying rather low—some 100 ft. or so, but with a machine like the "Moth" this was quite safe, as one can land it in almost any field. It was much more bumpy, also, going home, but the Channel crossing was accomplished with comfort in 20 mins.

Cobham arrived back at Croydon at 7.30 p.m., having thus taken 7½ hours for the return trip—the average speed in this case being only a little more than 60 m.p.h. The following figures of the flight are extremely interesting: Distance flown, 1,000 miles (approx.); total time, 14 hrs. 36 mins.; flying time, 13 hrs. 51 mins.; average speed, throughout, 71 m.p.h.; petrol consumed, 56 galls.; oil, 14 pints; approx. cost per mile, 1d. It is of interest to add that the cost for the same journey by trains and boat is over £11, and the time taken is 37 hrs! In short, Alan Cobham's object in making this flight—to prove that a light aeroplane, such as the "Moth," which can be flown by an average person, may be flown over long distances at a reasonable cost—has been extremely successful.

As regards the machine and engine, which have come through the ordeal so well, we do not think it will be necessary for us to say much here, for both have been fully described quite recently in *FLIGHT*—the De Havilland "Moth" in our issue for March 5 last, and the "Cirrus" engine for February 26 last. However, we think the main characteristics of each may well be given on this present occasion.

The "Moth" is a two-seater tractor fuselage biplane in which simplicity and robustness are the keynotes in the design. It does not belong to the "motor-glider" class, but rather follows usual "grown-up" aeroplane practice. In fact, in general appearance, it is not unlike a young specimen of the famous D.H.9. The overall span of the "Moth" is 29 ft. and the length is 23 ft. 5½ ins. Its weight, empty, is 764 lbs., and loaded, about 1,250 lbs. The wings are made to fold back, thus facilitating storage.

The "Cirrus" engine—which, it must be admitted, has achieved a really great success in this flight—is a four-cylinder vertical air-cooled engine, designed specially by the Aircraft Disposal Co., of Kingsway, London, to meet the requirements of schools and privately-owned machines. It has a bore and stroke of 105 and 130 mm. respectively, and develops a normal brake horse-power of 60 at 1,800 r.p.m. and a maximum brake horse-power of 65 at 2,000 r.p.m. The total weight, less fuel and oil, is 260 lbs. The cylinders, with cooling fins, are of cast iron, with detachable aluminium alloy heads. The pistons are also of aluminium alloy. A Zenith type F.S. 42 carburettor is fitted, and ignition is by a four-cylinder B.T.-H. magneto fitted with an impulse starter.

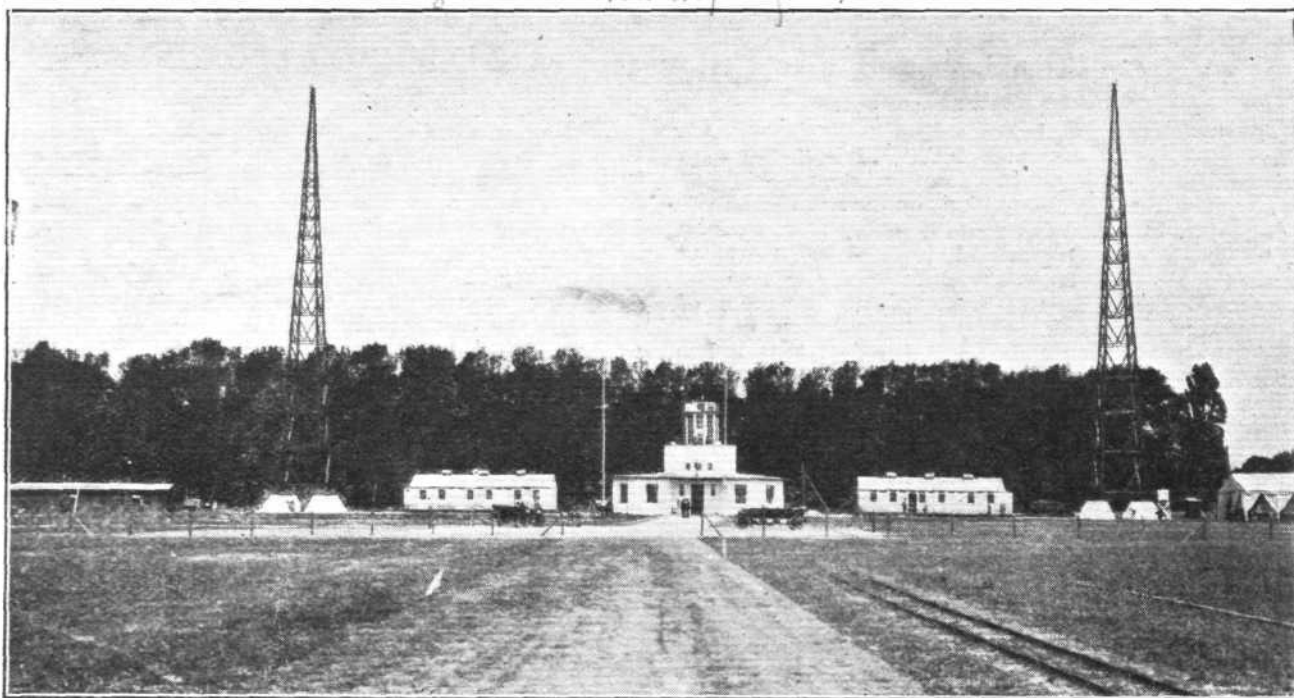
In conclusion, it may be noted that the D.H. "Moth," with "Cirrus" engine, has been chosen for the new British Light 'Plane Club, and several will, it is hoped, be put into service within the next few weeks.



LONDON-ZURICH AND BACK IN A DAY: The De Havilland "Moth" (D.H. 60) light 'plane, fitted with a 60 h.p. "Cirrus" engine, on which Alan Cobham flew from London to Zurich and back in a day. The "Cirrus," which is manufactured by the Aircraft Disposal Co., is a 4-cyl. "in line" (vertical) air-cooled engine.

SOME IMPRESSIONS OF THE ROUND-GERMANY FLIGHT

German Rundflug 1925 3



ROUND-GERMANY FLIGHT : The wireless masts and station, and the starting and finishing line.

Berlin, Thursday, May 28.

THE information kindly sent us by German aircraft constructors for publication in last week's issue of *FLIGHT*, concerning the machines taking part in the *Deutsche Rundflug*, 1925, was of such an interesting character that it became obvious that a visit to Berlin for the start of this great competition would be very well worth while, and consequently we find ourselves today in the Unter den Linden, en route to the offices of the Deutsche Aero Club, whose vice-president, Herr Major v. Tschudi, has very kindly promised us the necessary press passes, &c. We arrive at No. 17 Blumenhof in the western section of Berlin and find the building to be a large one in which are housed, in addition to the German Aero Club, the offices of the Albatros Co., the D.V.L., the *Zeitschrift für Flugtechnik und Motorluftschiffahrt*, and the equivalent to our British S.B.A.C. and, apparently, several other well-known institutions. We are at once admitted to Major v. Tschudi's office and are greeted with a hearty welcome in excellent English. Our press passes are all ready, neatly filed away and are handed to us by Major v. Tschudi's private secretary who also speaks English fluently. While we examine the passes and peruse the official programme also contained in the envelope Major v. Tschudi is busy on the 'phone receiving news of the machines, reports coming in every few minutes of entries definitely ready and certain to start in the competition. It is discovered that the armlet which we in England have come to regard as an essential part of our equipment is not included in our "armament." Major v. Tschudi explains that if it rested with him we should have our brassards, but

that the Berlin police refuse to grant press representatives this modern "Open Sesame." However, we have our press badges and leave the offices of the German Aero Club with hope in our hearts in spite of a very limited German vocabulary wherewith to fight possible challengers of our right to pass.

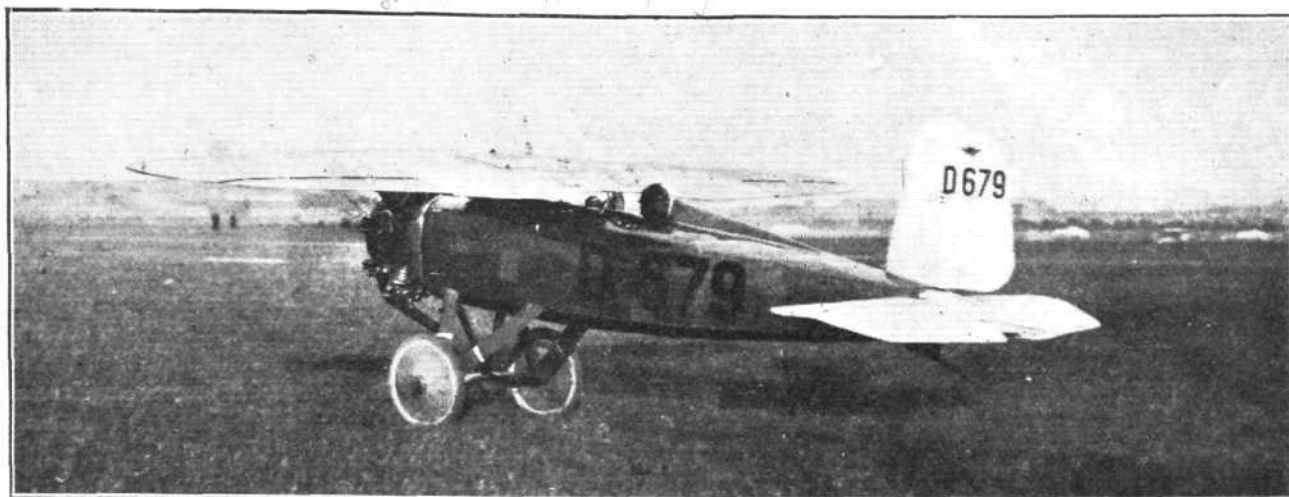
Although the start of the first circuit of the Round-Germany Flight does not take place until Sunday morning, the aerodrome is very naturally the centre of attraction, since it is to be expected that several of the competing machines will already have arrived, and to the Tempelhofer Feld we consequently proceed. The ride out from the centre of Berlin occupies but 15 to 20 minutes by car, so that it is at once brought home to one how very conveniently the aerodrome is situated. Even by tram the *Flughafen* can be reached from the centre of the city in about half an hour, several lines passing the new wide road which leads from the street down to the aerodrome gates. On arriving it is found that there is a great deal of activity, not only in connection with the *Rundflug*, but also in the regular business of the Berlin Air Terminal. The German Aero Lloyd have several very large hangars on the aerodrome, and at the far (eastern) end, on the left as one enters, is an imposing aerial suspended on two wood lattice masts some 100 ft. high or more. The lead-in goes to a substantial brick building in which are the wireless offices, etc., and on the roof of which is a large platform from which, during the *Rundflug*, the official observers will watch the departure and arrival of the machines. The starting line runs at right angles from in front of this building across the aerodrome, and at the far end of this line is dis-

German Rundflug 1925 17



ON THE STARTING LINE : In the foreground the Albatros L.69 with Bristol "Lucifer" engine, and behind it a Dietrich biplane

German Rundflug 1925 16



OFF! The Albatros L.69 with Siemens engine gets away

covered a number of tent hangars intended to house such of the Rundflug machines as cannot be accommodated in the permanent hangars on the near side of the aerodrome. No machines are to be seen outside the tents, but we promise ourselves a walk across to investigate as soon as the main sheds have been inspected.

Before turning our attention to the competition machines, a few impressions of the Tempelhofer Feld itself may be of interest. The aerodrome is, as already stated, extraordinarily conveniently situated, and is of large area. No actual dimensions are available, but as near as one can judge, the Berlin terminal aerodrome is somewhere between four and five times as large as Croydon, and although there is a slight ridge running along the aerodrome this is of such gentle curvature that it can scarcely make any appreciable difference to the alighting of machines. The surface is very smooth, but seems to consist of sand, covered sparsely with grass and weeds. The sandy nature of the ground is probably the only real objection to the Tempelhofer Feld, but is in a way a somewhat serious one, not only from the point of view of the public, who have, as we quickly discovered for ourselves, to put up with clouds of dust, but much more so for the engines and machines. It may be that when we saw the aerodrome it was unusually dry, a long period of very hot weather having preceded our arrival, but it seems likely that during a large proportion of the year the dust must be the source of considerable trouble with engines, as it can hardly be avoided that considerable quantities are sucked into the induction pipes and thence into the engines, where it probably forms an excellent abrasive compound when mixed with oil and petrol vapour. It is fortunate that the prevailing winds blow towards the sheds so that there is seldom much taxiing to be done in taking off, otherwise the dust trouble would be considerably aggravated. As it is, machines arriving often seem to have to taxi up to the sheds in clouds of dust.

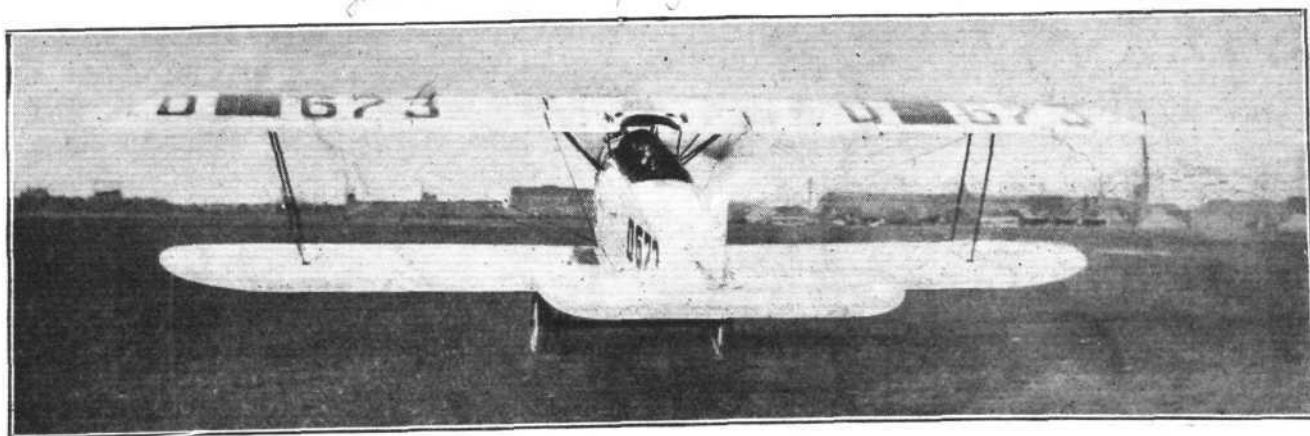
On our arrival a number of Junkers monoplanes of the "Annelise" type were drawn up in front of the sheds, and every time an engine was started the whole batch of machines

was smothered with fine sand. The Aero Lloyd company appears to use mainly Junkers machines, but several Fokker F.III's, with Siddeley "Puma" engines, were also observed, as well as one or two Dorniers of the "Komet" type, with Rolls-Royce engines. In the sheds were also some of the machines used on the Berlin-Copenhagen-Malmö air route, and carrying the Swedish registration letter S, followed by four other letters. One machine carried the identification S-A.T.A.A., so that it would seem likely that in time, when Sweden has obtained more machines, one may expect to see one with the letters S.A.T.A.N. painted large on its fuselage. To whatever type of machine falls this identification, it should prove "hot stuff."

Judging from the number of machines departing and arriving, the Aero Lloyd is very busy, as might be expected from the fact that Berlin is a centre from which air lines radiate in many directions. The intervals between machines were very short, and a very large number must arrive and depart in the course of a day. The traffic appeared to be mostly passengers (a fact accounted for by the reason that the fare is approximately the same as first-class on the railways), but several machines were also observed being loaded with newspapers, and evidently Germany is alive to the importance of getting her newspapers distributed to distant towns in the quickest possible time. The fact that Aero Lloyd machines were constantly going out for, or coming down from test flights did not, of course, minimise the impression of intense traffic, but even after making every allowance for these local flights there is no doubt that Germany is "taking to the air." One receives the impression that the German public regards it as a patriotic duty to take an interest in flying, and without a doubt Germany is well situated for the development of internal air routes, as well as for international lines when the time comes.

While on the subject of the Berlin terminal aerodrome, it might be mentioned that in one respect at any rate, the London terminal aerodrome appears to possess an advantage, i.e., in the matter of petrol supplies. In place of the under-

German Rundflug 1925 30



AWAY ON THE FIRST CIRCUIT: The Caspar "Köbes" starts

German Rundflug 1925 15



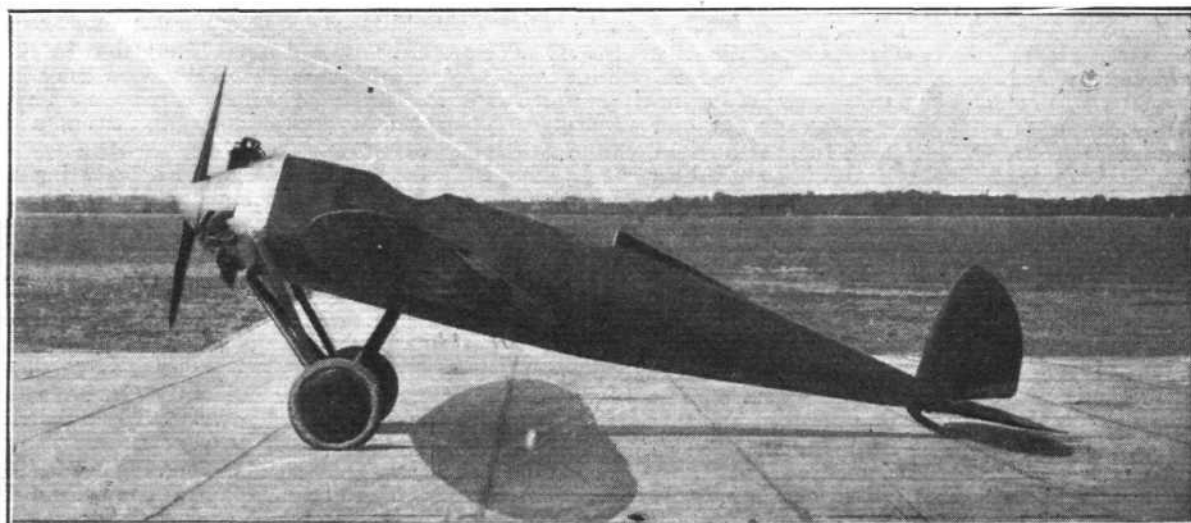
The Albatros L. 68 is a small single-seater biplane with 75 h.p. Siemens engine. In the competition it is piloted by Freiherr v. Richthofen, brother of the famous German air fighter

ground tanks and large petrol pumps at Croydon, the German commercial aeroplanes are fuelled from large cylindrical drums which are rolled out to the machines, the petrol being transferred to the tanks by small hand-operated pumps somewhat similar in appearance to a bilge pump. While less convenient than our method, the German system does

possess the advantage of mobility, as a machine can be fairly readily refuelled at almost any point in the aerodrome.

Preparing for the Rundflug

However, to return to the main object of our visit, the Rundflug machines, the permanent hangars were found



The Bäumer monoplane with Wright engine is probably the fastest in Class B, and is being piloted by Herr Bäumer himself

German Rundflug 1925 23



The Bäumer biplane is of a red colour which nearly defeated our photographer. The engine is a Wright three-cylinder, air cooled

German Rundflug 1925 29



The Caspar C.26 has an exaggerated gap and a very peculiar tail. The engine is a Bristol "Lucifer"



The Caspar "Köbes" was designed by Herr Karl Theis, who has now joined the firm as chief designer. Herr Theis was formerly chief designer of the Halberstadt Works

today to contain quite a number of machines carrying identification numbers greater than 600 (German civilian aircraft registrations have now reached numbers approaching 600, and in order to facilitate identification of the com-

petition machines their numbers commence at 601), many being of the well-known Junkers all-metal type of construction. The main attraction among the Junkers machines is, of course, the new low-wing monoplane type T.29, which is

German Rundflug 1925 52

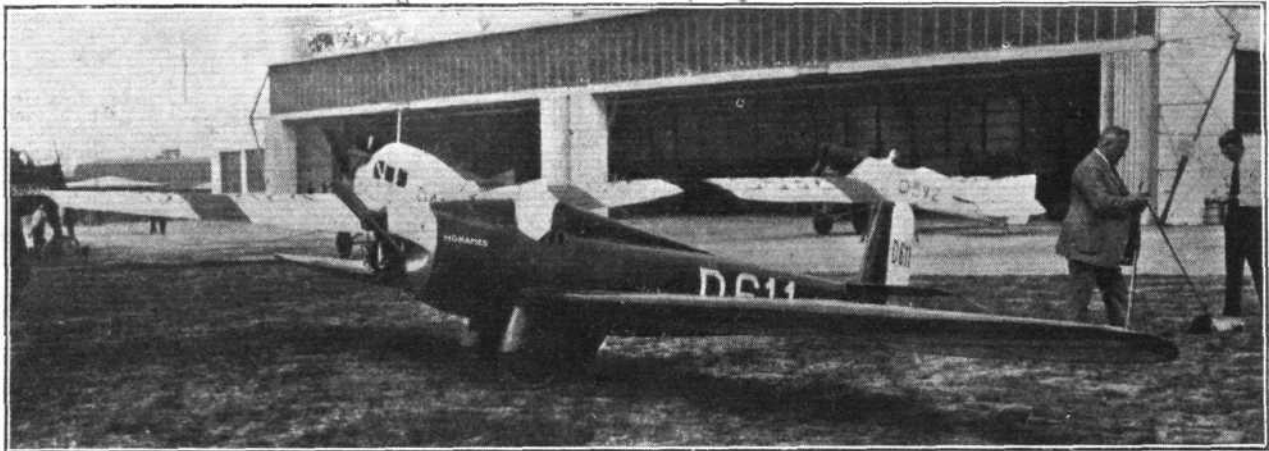


The Mercedes-Daimler L.21 light 'plane is fitted with two Mercedes air-cooled engines of 19 h.p. each. The two L.21 machines are the only twin-engined aeroplanes in the competition

to be seen in public for the first time. This machine turns out to be remarkable, chiefly on account of a new type aileron, which looks as if it was intended to give "slot effect," although this is denied. The flaps run the whole length of the wing, and are so mounted as to have their leading edge a distance of some 6 ins. below the trailing edge of the main

Friday, May 29.—Today the weather is even hotter than was the case yesterday, and the dust and sand of the aerodrome more troublesome. A number of machines have now arrived, some by air and others by road. There is great activity everywhere; engines are being tested, and final adjustments are being made to the machines. For the

German Rundflug 1925 35



The Darmstadt "Mohamed," with Blackburne engine, has flown exceptionally well in the Rundflug. It was designed and built by the Darmstadt students

wing. This, incidentally, comes to a sharp edge in the usual manner. The flaps are pivoted on brackets mounted on top and some distance back from their leading edge, so that when they are pulled down their leading edges rise and approach the trailing edge of the main wing. It is thus difficult to believe that there should be no "slot effect" or, at any rate, a tandem aerofoil effect similar to that investigated at the N.P.L. It was said that in the T.29 the flaps are connected with the elevators, but this we were not able to ascertain for ourselves.

In addition to the Junkers machines a number of Heinkels were on the aerodrome or in the sheds. These are all biplanes of all-wood construction, the one monoplane entered having been crashed some days ago, the crash unfortunately resulting in the death of the pilot, Herr Rienau. The Heinkel machines

purpose of classification a standard test has to be passed by each engine. This consists in mounting a special calibrated propeller and revolution counter, thus ascertaining the maximum power of the engine at full throttle. The calibrated propeller is then removed, and the propeller to be used in the competition is fitted instead, the revolutions at full throttle being noted and the actual power delivered at full speed being ascertained. Among the machines which were not observed yesterday are a number of Udet's which are of very clean and pleasing design. Among them is the "Kolibri" type with A.B.C. engine. This parasol monoplane did very well in last year's Rhön competitions. The commercial monoplane—the U.8—with Siemens engine, and the U.10 low-wing monoplane are familiar types, but the U.12, an extremely neat little biplane with single Duralumin

German Rundflug 1925 40



The Junkers T.29 is of recent design, and is fitted with very unusual ailerons

impress one as being simple, plain, straightforward biplanes, with but two unusual features. One is the very pronounced forward stagger, which brings the top rear spar vertically above the bottom front spar, and but a single set of wing bracing cables being used. The second unusual feature to which reference has been made is the fitting of slot flaps. The wings themselves are ply-wood covered, and the shaping of the wing portion of the slot is therefore a fairly simple and certainly a very neat job. As the aileron moves down, the slot opens in the usual Handley Page manner. The engines used by Heinkel are variously water cooled and air cooled, but otherwise his biplanes remain very much alike whatever the type.

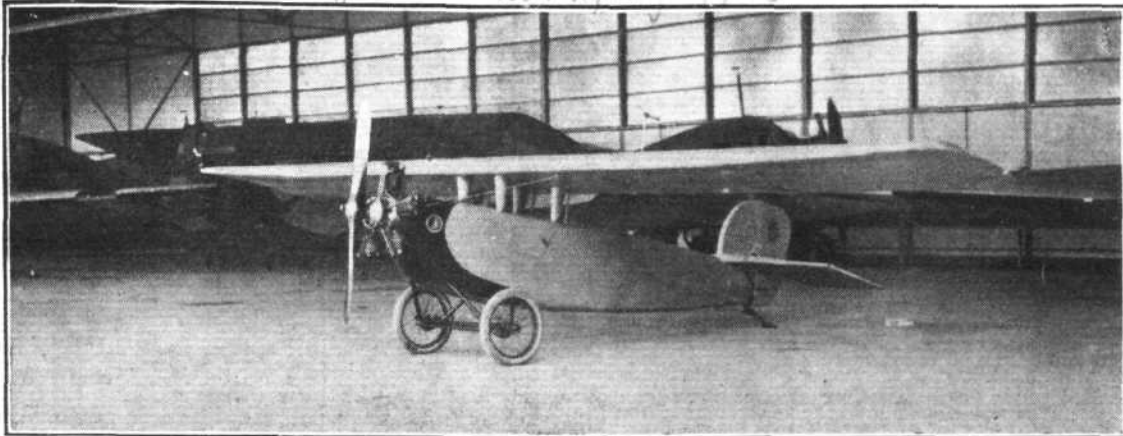
I-struts, is a recent type which has not, so far as we are aware, hitherto been shown in public.

The "Mohamed" light monoplane, with Blackburne "Tomtit" engine, is found to be a very creditable piece of work, considering that it was designed and built by the Darmstadt students. The compass of this machine is being checked and adjusted, the method employed being rather different from ours. The machine is placed with its longitudinal axis pointing towards a distant point whose exact compass direction is known, and a bearing is taken—the amount from which the compass in the machine differs from the standard being noted. The procedure is then repeated at other points of the compass.

A visit to the tent camp on the south side of the aerodrome reveals the fact that several of the aeroplanes have arrived, among which are a considerable number of machines from the Caspar works. These are all biplanes but differ considerably in appearance, and are fitted with a variety of engines. The most interesting from a British point of view

of wood. Like several of the machines entered, the Lübeck is the work of amateurs, and, as such, is a very creditable effort. It is shown in one of our photographs.

While inspecting some of the machines in front of the tent hangars we met Herr Dr. Ing. Lachmann, who, it may be remembered, invented the slotted wing at about the same



The Lübeck monoplane is the work of members of the Lübeck Aeronautical Society. The engine is a Siemens

is perhaps the type C.26, which is fitted with a Bristol "Lucifer" air-cooled engine. This machine is certainly not of particularly pleasing appearance, and it might in fact be described as being rather ugly, but in spite of this fact it has a rather vicious look about it, as if it meant business. The main characteristics of the machine are a very large gap, and a peculiar tall and narrow fin-rudder combination. This machine, incidentally, is not entered by the Caspar works, but by the Allgemeine Deutsche Sportverein (General German Sport Society). A Caspar machine of rather taking appearance is the C.T. 2B, with 100 h.p. Mercédès, which has been christened "Köbes." The engine is almost entirely cowled in. It is gathered that the letter "T" in the type title of Caspar machines denotes the name of Herr Dipl. Ing. Karl Theis, who has now joined the Caspar works as chief designer. Herr Theis was, during the war, designer to the

time as this was developed in this country by Handley Page. Herr Lachmann is, we learn, to pilot one of the Dietrich monoplanes in the competition, and is kind enough to give us a good deal of valuable information concerning personalities of note in German aviation. In company with Herr Lachmann we return to the hangars, where the Dietrich machines are housed, and we have a look around, not only at those, but at several other machines accommodated in the large permanent buildings. As the Dietrich machines were dealt with in last week's issue we scarcely need refer to them further this week. Of considerable interest because of their high speed are the Albatros type L.69 monoplanes. Naturally figures relating to speed are not available, but from watching one of the machines coming in it is obvious that they are many miles per hour faster than anything which has hitherto been seen. One of these monoplanes is fitted with a Bristol



The Udet U.12 is the first biplane to be built by this firm. The inter 'plane struts are of Duralumin

Halberstadt works, whose machines will not be unfamiliar to readers of FLIGHT. In the competition the C.T. 2B will be piloted by Herr Hollien, one of the Caspar test pilots. The C.26 machine with Bristol "Lucifer," is to be piloted by Herr Leo Roth, who expresses himself as extremely pleased with the Bristol engine. Herr Roth, it might be mentioned, holds the Hispano-Suiza concession for Germany.

Another machine, of which no particulars were available last week, is the Lübeck parasol monoplane, which is fitted with a Siemens engine of 55 h.p. The general design of this machine resembles the Dornier single-seater fighter, but the machine is, of course, very much smaller and built

"Lucifer" engine of 100 h.p., and the other with a Siemens of the same power. It will, therefore, be interesting to see how the two machines compare in the very strenuous flight around Germany, as they appear to be identical except for their engines. The Albatros monoplanes are all of wood construction with *monocoque* fuselages. The monoplane wing is also covered with three-ply, and is mounted in a peculiar manner, the front spar being supported on a central fin built integral with the body, while the rear spar is mounted on two tubular brackets raked outward from the fuselage, thus giving a form of three-point suspension. No cables are used in the aileron controls, which are in the form of torque tubes operated by cranks. This machine appeared

to require rather a long run in getting off, and with its clean design and heavy wing loading will probably run a long distance along the ground before coming to rest, so that making forced landings would not in all probability be a very easy matter.

In the meantime, work is progressing at a great pace in

German Rundflug 1925 41



Getting ready for engine tests : A metal sheathed calibrated propeller is used for ascertaining the power at full throttle. This photograph shows the Junkers T.29 being prepared.

the various enclosures, where restaurant tents are springing up like mushrooms. Loud speakers are being erected at various points to facilitate the making of announcements to the multitudes, which are, it is hoped, going to be present at the start on Sunday. Dust is everywhere, and it is fortunate that supplies of the national beverage seem to be plentiful.

In a small canteen, where those fortunate enough to possess passes of one sort or another so as to pass the police posted at the various entrances, are able to obtain refreshments, mainly in liquid form, one meets an animated company. Competitors are making their plans for the great race, and the pilots forget for the moment that shortly they will be fighting strenuously for first place and are now swapping experiences, while designers and constructors with famous names are discussing the merits of various types of machines

In view of the large number of Siemens' engines used in the Competition, it is not surprising to find Herr Gossiau, chief designer of Siemens' Aero engines, in discussion with constructors and pilots, and it is not long before he is called out of the canteen to settle some little problem which has cropped up in the sheds. Udet's chief designer, Herr Hermann, tells one of certain new developments that may be expected from the Munich factory, in the near future, but of these nothing may be said at present. Outside, on the aerodrome, the normal work of air transport goes on as usual and machines flying overhead are constantly interrupting the serious business of quenching a thirst engendered by the oppressive heat in which Berlin is panting. Accustomed as are all those present to flying and flying machines, there are few who can resist the temptation to rush to the doors or windows when an engine with a healthy roar is heard overhead, especially

German Rundflug 1925 34



Boxing the compass : An official taking a bearing for checking the compass of the Darmstadt "Mohamed."

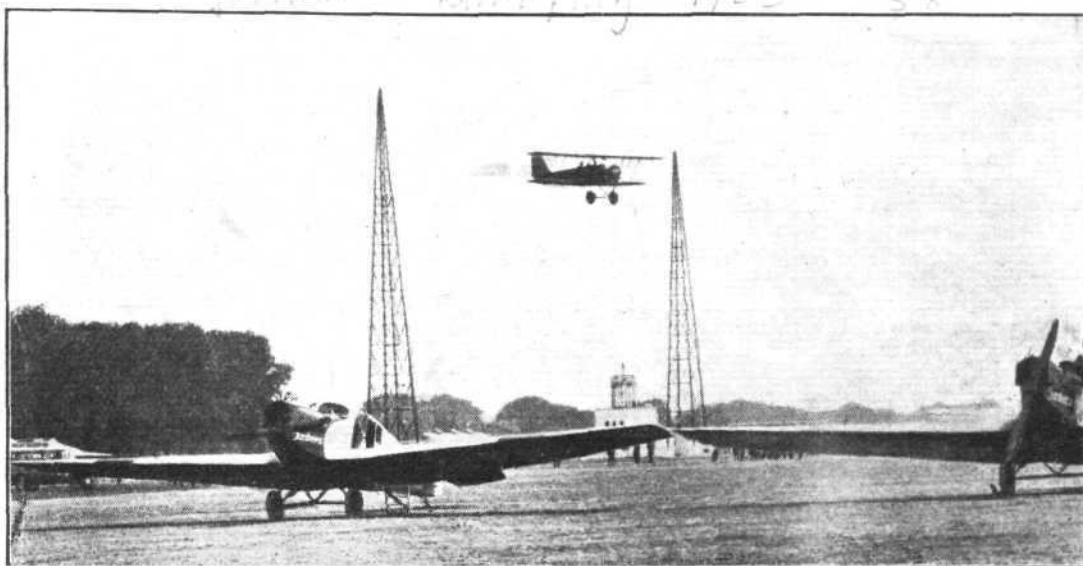
in highly technical language. Learned professors are also represented in considerable numbers, and altogether everybody is "talking shop" to their heart's content. A spirit of camaraderie pervades the small canteen. At one table is seen Herr Udet, who was a famous German air fighter during

as there is always the possibility of a new machine arriving, whose performance is naturally watched with great interest. Several machines for the competition are coming in, but evening is drawing on and we retire for a well-earned rest after tramping many miles across the sandy aerodrome.

Saturday, May 30.—This morning the weather has changed somewhat, and the oppressive heat of yesterday has given way to a fresh breeze. The wind indicators on the hangars stand out straight from their masts and the smoke from the fire which seems to be always kept burning in the middle of the aerodrome is blowing flat along the ground. A peculiarity of the Berlin aerodrome seems to be that the wind direction is constantly changing and one begins to realise that when the fabric cones of one hangar totally disagree with those of

signifying that the machine has hit the ground, and, of course, anxiety is felt for the occupants. A Red Cross ambulance rushes towards the spot where the machine was seen to fall, and it is noted with a certain amount of relief that whatever has happened the machine has not caught fire. It is not very long before news comes back that no one has been seriously injured. The pilot seems to have effected an extremely skilful "save," having decided to sideslip his machine to the ground, instead of attempting to

A Heinkel biplane coming in after a test flight. The machines in the foreground are Junkers commercial monoplanes.



another only a couple of hundred yards away, there is surely good cause for having a smoky fire always going on the aerodrome itself, so as to assist the pilots in choosing their proper landing direction. By now the majority of the machines seem to have arrived, but several to which we had looked forward are still absent. Among those are the batch of Bahnbedarf monoplanes with Blackburne "Tomtit" engines and the Martens and Messerschmitt machines. Of the L.F.G. machines, only an old biplane of about 1914 or 1915 design has arrived from the Stralsund works, but of the modern L.F.G.'s there is still no sign. Later in the day a rumour is current to the effect that one of the Bahnbedarf monoplanes has crashed on the way to Berlin, and that the pilot is somewhat seriously injured. For the moment, however, official confirmation of this rumour is lacking.

Towards noon, several commercial machines are leaving

turn back into the aerodrome. Had he done so, there seems to be little doubt that the result would have been a stall followed by a nose dive, and in that event the consequences would probably have been a great deal more serious.

After lunch we took the opportunity to walk across to the tent camp, where several new aeroplanes were noted. Among the more interesting of these were the two Bäumer machines, one a biplane and the other a low-wing cantilever monoplane, both having American Wright three-cylinder air-cooled engines. The monoplane particularly is a very clean-looking machine, and is to be flown in the competition by Herr Bäumer himself. The biplane is being piloted by H. v. Bülow. The Wright engine looks a robust and simple job, and the engine mounting is somewhat extraordinary, having the appearance of a three-point suspension with the two side lugs of the engine carried by pressed-steel cantilever



One of the scoring boards which are used to show the progress of machines in the competition

on their lawful occasions. A Fokker monoplane of the F.3 type is taking off, but after nearly crossing the aerodrome, it does not appear able to climb, and is heading straight towards the buildings on the opposite side. It soon becomes evident that the machine is going to be in trouble, and one waits anxiously to see what the pilot will do. Suddenly, one wing is seen to dip, and the machine sideslips to the ground, where it disappears from view behind a rise in the middle of the aerodrome. A cloud of dust is seen to rise,

arms with a third central support at the back of the engine. Herr Bäumer formed his Company a couple of years ago and exhibited machines at the Gothenburg Aero Show. These were not of Bäumer design, but the two machines entered for the Round-Germany flight are proprietary types and appear to promise well for the future of this young Hamburg company. We have not yet had an opportunity of seeing the machines fly, but the monoplane, at any rate, looks capable of a good turn of speed.

The Stahlwerk-Mark machines have also arrived and are biplanes and parasol monoplanes respectively. They are in general similar to the Rieseler machines, which have been illustrated in FLIGHT from time to time.

The engines on the various Caspar machines are being overhauled, and we notice a particularly neat engine cowl on the Caspar C.24. This cowling is made of fairly heavy-gauge duralumin, and is divided on the centre line of the machine so that when hinged back the entire engine installation is accessible.

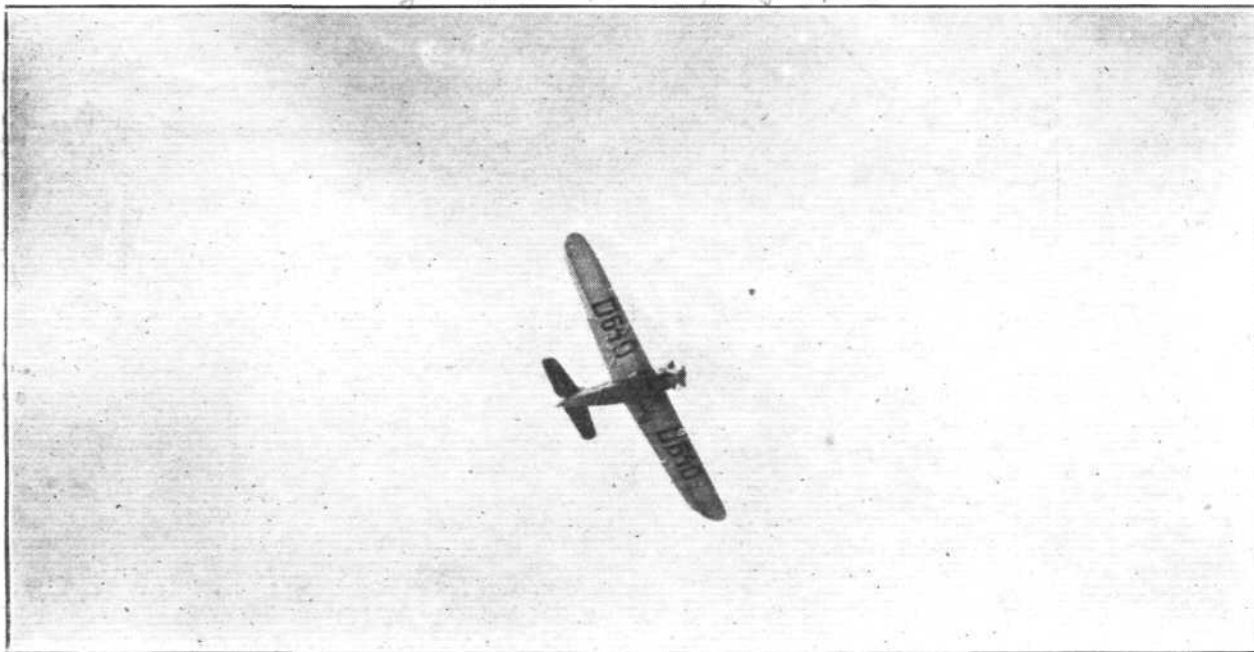
In many ways the most remarkable of all the machines in the competition are the Mercedes-Daimler parasol monoplanes, type L.21. Built at the Sindelfingen works of the Daimler Company, these machines are parasol monoplanes, with two of the 19 h.p. Mercedes engines mounted on the leading edge of the wing. The fuselage is suspended on struts a considerable distance below the wing, and the pilot is placed right in the nose of the fuselage where his view must be particularly good. The Mercedes engines are rated at 19 h.p. each, and are of the flat-twin air-cooled type. They look robust, simple, and well made, and are, we believe, making their appearance for the first time. The L.21 type

and Messerschmitt machines, so that it now seems extremely improbable that these will be able to take part in the competition.

The Start

Sunday, May 31.—Knock-knock. Knock-knock. A sleepy "Yes, what is it?" "Drei Uhr M'herr." Ah yes, of course. This is the morning of the start of the *Deutscher Rundflug*. A glance at the watch shows it to be some 30 minutes after "drei Uhr," but there is no time now for arguments with the night porter. A missed shave, a hurried and not over-thorough wash, a two-minute round with an obstinate collar-stud, hat and coat on, and we are tumbling down the stairs, not yet fully awake but realising that speed is essential. Fortunately, a taxi is handy, and soon we form a part of the stream steadily converging on the Tempelhofer Feld. From all directions people are flocking to the aerodrome. In private cars, in taxis, by tram and bus, on bicycles and on foot, the Berliners make their way, at varying speeds but with equal determination, towards what was the old Imperialistic Germany's parade ground, but which has now been converted into probably the most centrally situated terminal aerodrome in the world. Grey clouds hang low,

German Rundflug 1925



FIRST MAN HOME : The Udet U.10, piloted by Billik, was the first to cross the finishing line after covering the first circuit

of machine is interesting, not only on account of being a twin-engined light plane, but because it is the only twin-engined type in the whole competition. Up till now they have not been flying, so one has had no opportunity of judging their performance, and as at least one of them is barely finished it seems somewhat doubtful if they will start at 4 a.m. tomorrow morning. A photograph of the L.20 type Daimler was published last week with a few particulars, but it is interesting to see the actual machines, which are of particularly handsome appearance. A peculiar aileron combination is employed on the Daimler machines, consisting of an ordinary aileron to which is coupled a small balanced flap extending outward from the wing tip. The method of inter-connection is such that the wing tip flaps cannot be regarded as balances, and are therefore presumably used to increase the effectiveness of the trailing edge flaps.

On returning to the sheds, several Focke-Wulf monoplanes are inspected. Photographs of two of these types were published last week, i.e., the Siemens engined machine, and the more modern A.16A, with Mercedes engine, while a different version has been entered by the Junkers firm and is equipped with one of the six-cylinder vertical Junkers air-cooled engine. The Focke-Wulf machines are generally regarded as the most efficient of the German commercial aeroplanes, but the Mercedes engined type would seem to be somewhat uncomfortable for the pilot, who is seated next to the engine, and might be rather warm during the hot summer months. Incidentally, it might be of interest to note that the only commercial aeroplanes entered are the Focke-Wulfs and the Udet type U.8.

There is still no sign of the Bahnbedarf, L.F.G., Martens

and there seems to be every likelihood of rain. At the end of the broad approach to the aerodrome gates the congestion of traffic becomes hopeless, and we decide that for once the most ancient form of locomotion will be the quickest. So, abandoning the taxi, we walk towards the road turning off the approach and towards the tent camp. Alas, there is no possibility of getting through that way. We are firmly but politely informed that for the press there is an enclosure on the other side of the aerodrome, near the wireless station. An attempt at taking a short cut is equally unsuccessful, and we begin to realise the truth of the saying which they have in Germany, and told us by Prof. Bergson, that in Germany all is *verboten* which is not permitted, while in England all is permitted that is not forbidden, and, best of all, in happy Austria all is permitted that is forbidden. Would that we were in Austria.

However, we at last reach the alleged press enclosure, which turns out to be already occupied by a crowd of people whom one judges to be the *Ehrengäste* referred to on a notice board. Guests of honour they may be, and transparently honest in their determination to see everything, but far from transparent enough to enable us to see the starting line through them. To make matters worse, it begins to rain, and it becomes expedient to seek shelter under one of the numerous "sunshades" dotted about the enclosure. Here the ground is found to be a little higher, and it becomes possible to catch occasional glimpses of some of the machines that are crowding around the starting line. It is well after the official starting time before the first of the class A machines gets away, this being the Udet "Kolibri" with A.B.C. engine. The little parasol monoplane climbs well and makes a few right-hand circuits to gain height before setting off. The Blackburne

engine of the Darmstadt "Mohamed" does not seem to like the cold morning air and refuses to start. After three minutes this machine must, according to the regulations, wait until all the other machines in her class have been dispatched. The two Mercedes-Daimler L.20's get away quickly and climb relatively well. The Udet U.10 low-wing monoplane makes a very pretty start, followed by a Dietrich and the Lübeck parasol monoplane. The Blackburne "Tomtit" has now been started, and the little Darmstadt monoplane commences her long journey. The climb is not spectacular, of course, and does not appear to compare with that of the D.H.53 fitted with a similar engine. The bumps are pretty severe, but the machine seems to handle well. Herr Bäumer in his low-wing monoplane makes the best get-off of the lot and streaks off across country without waste of time, the machine appearing very fast. The Bäumer biplane follows shortly afterwards, its pilot putting its nose up at an alarming angle. From now onward the machines appear to be getting mixed up as regards starting in their proper groups, and it becomes impossible to keep tally. The Albatros monoplanes, obviously the fastest machines in the competition, are away at great speed, and by about 5.30 only a few stragglers are left who for various reasons are unable to get away. Some of the machines officially started have returned to the aerodrome to effect adjustments to carburettors, etc., and it is almost hopeless to try to follow the turn of events.

Having had nothing to "stop that sinking feeling," we make for the nearest restaurant tent, where a hot breakfast is more than welcome. By half-past six the official scoring board shows that four machines are still at Berlin, two have reached Schwerin (the Bäumer and the Udet 10), while 35 are on their way to Schwerin. For the next two hours or so there is little to see except a few variously successful attempts at starting. Presently, however, the monotony is relieved by one of the twin-engined Daimler L.21's getting away, climbing well and circling to gain height. The gusts cause the machine to roll and pitch somewhat, and a start across wind does not look reassuring even if the machine responds well to her controls. Nevertheless, when the L.21 has reached a sufficient altitude she sets off at what appears to be a very good speed. Another wait for "something to

turn up" is rewarded by a considerable improvement in the weather. The sun even threatens to shine, and one begins to feel that things might be a lot worse, after all. A Junkers biplane goes up, and gentlemen with megaphones announce that a parachute descent is about to be made. The parachute, which is of the free type, opens quickly but looks to be somewhat small, and the rate of fall is considerably more rapid than we are accustomed to in England.

Shortly afterwards a Dietrich biplane takes off in a most spectacular fashion, the pilot not flattening out after his zoom an instant too soon. As we have never seen a German pilot stunting before, and it is announced that we are to be treated to an exhibition, we watch the Dietrich with interest. The "show," however, turns out to be a very tame one, and would certainly not satisfy a blasé English crowd. The simple loops and "Immelmann turns" are not wildly exciting.

The scoring boards are beginning to offer more attractions, and by 11.40 a.m. they announce that the Udet 10 has passed Münster and is on its way to Cassel, while the Bäumer monoplane has reached Münster. The Albatros L.69 is on its way to Münster from Bremen, as are also another U.10 and the U.8, so that evidently the Udet machines are doing well. The rest of the machines are spread about along the route, some of them down with minor troubles and others carrying on at lower speed.

For some time no reports come through, but unless something has happened the U.10 should be nearing home, and about two o'clock the little red monoplane comes in sight, going very fast down wind, and, swooping down past the enclosures, turns into the wind and lands. Herr Billik is given a well-deserved cheer, and one begins to speculate upon the identity of No. 2 home. He soon arrived at a very fast pace, and turns out to be Ungewitter on the Albatros L.69. During the rest of the afternoon 21 more machines returned, making a total of 23 out of the 50 or so that started this morning.

Twelve more machines returned to the Berlin aerodrome during Monday, among which was the little Darmstadt monoplane with Blackburn engine, so that out of the total of fifty machines or so, thirty-five returned within the prescribed time limit.



4.30 a.m. : Machines on the starting line getting ready to leave on the first circuit of the Round-Germany Flight.

THE ROYAL TOURNAMENT

THE Royal Tournament, which was opened at Olympia on May 28 by the Duke of Connaught, will give its last performance on June 13, so our readers still have time to go and see it—and see it they must, if it be at all possible to do so. For it must be said at the outset that from start to finish it is undoubtedly the best and most thrilling of all the 42 Tournaments that have so far been produced. Apart from the charitable object of the Tournament itself, therefore, readers of FLIGHT who are in a position to do so should make every effort to visit Olympia, if only out of loyalty to Aviation, for we can promise them something well worth seeing in the part played in this Tournament by the Royal Air Force. As Lord Ruthven said, the R.A.F., it was rumoured, this year had set themselves to go one better than the Guards, and from what we have seen—Well, just go and see for yourselves.

We would very much like to give a detailed description of the various events that go to make up each performance (there are three per day), but, unfortunately, we have not the

space, and we can only just briefly refer to the salient features.

In the mornings the various Inter-Service competitions—sword, lance, revolver, foil, jumping, etc., etc.—take place. Then in the afternoons and evenings (commencing at 2.30 and 8 p.m. respectively) the Tournament proper is held. This consists of the following events, some of which vary slightly in character on certain days: Royal Naval and Royal Marine Inter-Port Field Gun Competition; drill display by the Royal Air Force; combined physical training display by the Services; musical ride by the Life Guards; mounted display by Continuation Class and Staff of Equitation School, Weedon; riding and driving display by the R.A.S.C.; combats and displays of rapier and dagger, broadsword and buckler, and quarterstaff by Army Physical Training Staff; jumping displays; tug-of-war; the "Cat Burglar" by the Royal Engineers and Army School of Physical Training. Finally, one of the most interesting and spectacular pageants yet produced: "Ubique," a grand Royal Artillery pageant, showing the progress of artillery from 1685 to the present day.

Personals

To be Married

The engagement is announced of Squadron-Leader G. G. A. WILLIAMS, R.A.F., third son of the late Capt. G. S. Williams, 8th Hussars, and KATHLEEN MARY, daughter of the late Lieut.-Col. G. K. ANSELL, 5th Dgns., and Mrs. Ansell, of Gorse House, Rugby.

THE marriage of Mr. C. A. GOATCHER, R.A.F., and Miss AMY I. MARMION will take place at the Church of St. Michael and All Angels, Bedford Park, W., on Saturday, June 6.

The marriage arranged between Squadron-Leader CLAUDE

BIRTHDAY

HIS MAJESTY THE KING celebrated his sixtieth birthday on June 3, and the following names appear in the list of honours which has been issued:—

Viscount

Marcus Baron Bearsted. For great public benefactions and political services.

Order of the Bath

C.B. (Military Division)

Group Capt. John Adrian Chamier, C.M.G., D.S.O., O.B.E., R.A.F.

Order of the British Empire

Military Division

K.B.E.

Air Vice-Marshal John Frederick Andrews Higgins, C.B., D.S.O., A.F.C., R.A.F.

C.B.E.

Wing-Commander Augustine Ap Ellis, R.A.F.

O.B.E.

Sqdn.-Ldr. Norman Channing Spratt, R.A.F.

Flight-Lieut. Albert William Fletcher, D.F.C., A.F.C., R.A.F.

Flight-Lieut. Norman Hugh Jenkins, D.F.C., D.S.M., R.A.F.

M.B.E.

Flying Officer Ernest Stanford Bullen, R.A.F.

Flying Officer Edwin James Newman, R.A.F.

At the Levée

At the Levée held by His Majesty the King on May 25, at St. James's Palace, the following were present: Air Marshal Sir John Salmond, K.C.B., C.M.G., C.V.O., D.S.O. (Principal Air Aide-de-Camp); Group-Capt. L. W. B. Rees, V.C., O.B.E., M.C., A.F.C. (Air Aide-de-Camp); Wing-Commander W. Barker, V.C., D.S.O., M.C., Royal Canadian Air Force; Flight-Lieut. A. Bond, A.F.C.; Flight-Lieut. E. Davis; Flight-Lieut. T. Elmhirst, A.F.C.; Flight-Lieut. P. Fullard, D.S.O., M.C., A.F.C.; Pilot Officer B. Hemsley; Flying Officer E. Joliffe; Air Vice-Marshal C. Lambe, C.B., C.M.G., D.S.O.; Group-Capt. W. MacNeece, C.B.E., D.S.O., D.F.C.; Flight-Lieut. J. McBain, D.F.C.; Flight-Lieut. A. Paull; Flight-Lieut. G. Pirie, M.C., D.F.C.; Flight-Lieut. A. Pryor; Sqdn.-Ldr. C. Ridley, D.S.O., M.C.; Flying Officer C. Tidy; Flight-Lieut. A. Wombwell; Flight-Lieut. J. Woodhouse, D.S.O.; M.C.; Flight-Lieut. F. Workman, M.C., etc.

ALWARD RIDLEY, D.S.O., M.C., R.A.F., youngest son of Mr. and Mrs. Louis C. Ridley, of Holland Park, and LILIAS ELIZABETH (NAIDA), elder daughter of Mr. and Mrs. Robert MCALPINE, of East Grinstead, and grand-daughter of Sir Robert McAlpine, Bt., will take place at St. Mark's, North Audley Street, to-day, Thursday, June 4, at 2.15 p.m.

Item

Lieutenant Chevalier WILLY COPPENS, Air Attaché at the Belgian Embassy, who holds the same position at the Embassy in Paris, arrived in London on May 20 from France.

HONOURS

No. 2731 Sergt.-Maj., 1st Class, Albert Edward Harbot, R.A.F.

No. 224451 Sergt.-Maj., 2nd Class, Reuben Charles Pennicott, R.A.F.

Civil Division

C.B.E.

Col. Ivor Curtis, M.A., A.M.I.M.E., Educational Adviser Air Ministry.

O.B.E.

Ivor Blashka Hart, Esq., B.Sc., Ph.D., Education Officer, Grade I, Air Ministry.

John Burton Newman, Esq., Education Officer, Grade II, Air Ministry.

George Rowley Richardson, Esq., Statistical Officer, Air Ministry.

Harry Shires, Esq., Civil Engineer, Works and Buildings Department, Air Ministry.

ROYAL AIR FORCE

The following awards are made:—

Air Force Cross

Flight-Lieut. Richard Burnard Munday, D.S.C.

Flight-Lieut. William Edmund Somervell.

Air Force Medal

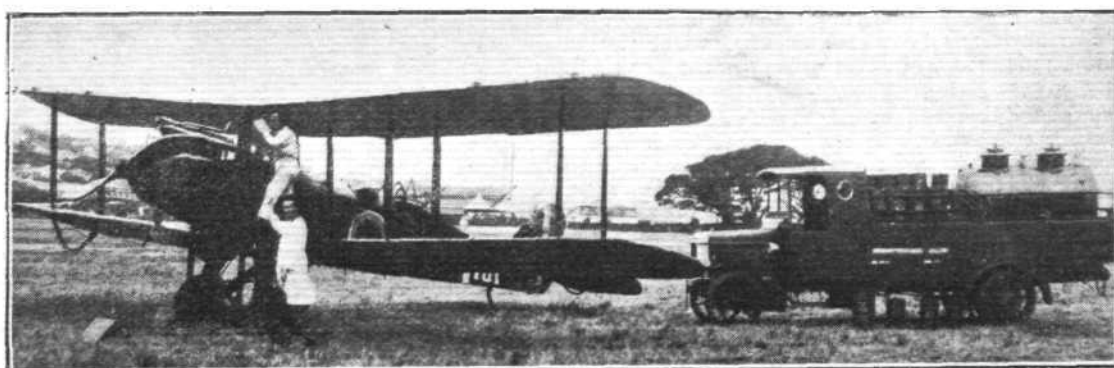
341398 Sergt. (Pilot) Alfred Percy Reeve.

Czecho-French Air Convention

SPEAKING at the concluding meeting of the Air Convention, held last week in Prague, between Czechoslovakia and France, M. Laurent Eynac, the French Under Secretary for Air, referred to the importance, as regards these two countries, of organising air traffic in Europe. The route between Paris and Constantinople passed through Prague, and a further line would be established between France, Warsaw, and Moscow. By establishing branch lines from these routes, Paris and Prague would become the centres of a vast network of international air routes.

M. Laurent Eynac further stated that by the terms of the French convention, the technical knowledge and equipment of the French air service would be placed at the disposal of Czechoslovakia, and opportunities would be given for Czechoslovakian engineers and officers to study in French schools.

With the South African Air Mail: Our illustration shows one of the D.H. machines of the Union of South Africa Air Mail Service filling up with "Shell" spirit at Durban.



THE ROYAL AIR FORCE

London Gazette, May 26, 1925.

General Duties Branch

The following Flying Officers are granted permanent commissions in that rank (May 27):—D. M. Fleming, A. H. H. MacDonald, Lt. A. M. Pilling, R.N., is granted a temp. commission as a Flying Officer on attachment for four years' duty with R.A.F. (April 27). P. J. Fitzgerald, Lt., R.N., Flying Officer, R.A.F., relinquishes his temp. commission on return to naval duty (May 17). The short service commissions of the follg. Pilot Officers on probation are terminated on cessation of duty (May 27):—W. E. Fleming, A. R. C. Kirby.

Stores Branch

The follg. are granted short service commissions as Pilot Officers on probation, with effect from and with seniority of May 25, 1925:—F. Scutt,

D. G. Vaughan. The follg. are transferred to Stores Branch on probation in ranks stated, with effect from, and with seniority of, May 25, 1925: *Flying Officers*.—R. M. Taylor, M.C., C. W. H. Moller, J. F. Young, M.M., C. B. Horsfield, F. H. Bedford, M.C., M.M. *Pilot Officers*.—R. W. Hemsley, St. J. F. Wintour (Lt., 16th Bn. London Regt., T.A.).

Chaplains' Branch

The Rev. W. T. Rees is granted the local relative rank of Wing Commander while employed as senior Chaplain, Iraq Command (Jan. 13).

Reserve of Air Force Officers

Flying Officer F. G. S. Musson is transferred from Class A to Class C (May 26). Observer Officer M. J. Wyatt is transferred from Class B to Class C. (May 26).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Flight Lieut.—J. B. Allen, to Boys' Wing, Cranwell; 25.5.25.
Flying Officers: W. J. Shilcott, D.S.M., to Air Ministry; 8.6.25. E. R. Hockaday, to No. 1 Stores Depot, Kidbrooke; 8.6.25. J. A. Moore, to R.A.F. Depot, on appointment to a short service commn; 25.5.25.

Stores Branch

Flying Officers: R. M. Taylor, M.C., C. W. H. Moller, J. F. Young, M.M., C. B. Horsfield, and F. H. Bedford, M.C., M.M., to No. 1 Stores Depot, Kidbrooke; 25.5.25.
Pilot Officers: B. W. Hemsley and St. J. F. Wintour, to No. 1 Stores

Depot, Kidbrooke; 25.5.25. F. Scutt, D. G. Vaughan, A. Amy and C. E. Burke, to No. 1 Stores Depot, Kidbrooke, on appointment to short service commns. (on probation); 25.5.25.

Accountant Branch

Flight Lieutenant: F. W. Arthurton, to No. 4 Flying Training Sch., Egypt. 4.5.25.

Pilot Officer: A. McBroom, to H.Q., Cranwell. 18.5.25.

Medical Branch

Flight Lieutenant: W. Parsons, to Central Med. Board, 30.5.25. J. Prendergast, M.B., B.A., to No. 100 Sqn. Spittlegate; 26.5.25.

Flying Officer: C. G. J. Nicolls, M.B., to No. 13 Sqn., Andover; 26.5.25.

IN PARLIAMENT

The Air Ministry

REAR-ADMIRAL SUETER, on May 25, asked the Prime Minister whether he could give an assurance to the House that it is the settled policy of the Government to maintain the Air Ministry as the Department responsible for aviation, development of airships, and air defence, and not to diminish its responsibilities or to absorb it in the Admiralty or any other Department?

The Prime Minister: No change is at present contemplated in the existing responsibility.

British Air Service to Czecho-Slovakia

MR. ALBERY asked the Secretary of State for Foreign Affairs whether in view of the German refusal to allow any regular British air service to cross to Czecho-Slovakia, he proposes to take any action?

Mr. Chamberlain: The German Government are free to sanction or refuse to sanction such flights of aircraft over their territory as they think fit.

R.A.F. Administration in Near East

SIR F. SYKES, on May 26, asked the Secretary of State for Air if he is yet in a position to make a statement in regard to economies in Air Force administration in the Near East?

Sir S. Hoare: I hope to be in a position to make a statement on this subject shortly.

Aero Engines Tests

SIR F. SYKES asked how many aero engines, and how many types of aero engine, were tested to destruction in the year ending the 31st March, 1925, with a view to the successive elimination of weak points in design?

Sir S. Hoare: If by testing to destruction my hon. and gallant friend means testing until some definite failure is disclosed, the answer is that every type of engine under test, amounting to 26 types in all, was so tested in the year ending 31st March last. The object of these tests is to obtain a progressive increase in the power output of engines while conforming to the prescribed standard of reliability, and failures occurring in any particular tests indicate the modifications required before an engine can be accepted at the rating which is being aimed at. It would be a matter of great difficulty to give the exact number of engines concerned, since the same engine may be submitted to test many times and may develop either the same or different failures at different times, and, moreover, the tests are carried out at various centres, the records of which would have to be consulted.

Air Services, Egypt and India

SIR F. SYKES asked whether the commercial operation of the air route between Egypt and Iraq or of a route between Iraq and India is now again contemplated by the Air Council; and, if so, when it is proposed to bring such a policy into effect?

Sir S. Hoare: The question of the operation of a commercial air service between Egypt and India is again being carefully examined, and I hope to be in a position to make an announcement on the subject shortly.

Singapore and Air Defence

SIR GERALD STRICKLAND on May 27 asked the Secretary of State for Air what is the estimated cost in this financial year of the air defence of Singapore; and will he obtain an approximate estimate thereof on the completion of the base there according to present plans?

The Secretary of State for Air (Lieut.-Col. Sir Samuel Hoare): As regards the first part of the question, no expenditure from air votes is contemplated this year for the purpose mentioned, with the possible exception of a sum not exceeding £300 for a detailed survey of the site of the aerodrome. As regards the second part, it is impossible at present to give even an approximate estimate of the cost of the scheme of air defence that may be found necessary.

Sir G. Strickland: Is it wise to embark on the construction of a great naval base at Singapore without reckoning the probable ultimate cost of upkeep?

Sir S. Hoare: I have already pointed out that no expenditure has yet been involved on the Air Vote.

Qualified Pilots

COL. WOOLCOCK asked the Secretary of State for Air whether he can give the proportion of qualified pilots in the Air Force in relation to the number of the other officers and men in the Force; and whether he can give the corresponding proportion for the French Air Force?

Sir S. Hoare: The percentage of pilots qualified or at present under training in relation to the total number of officers on the strength of the Royal Air Force is 74, whilst the percentage in relation to all ranks is approximately 8. As regards the second part, in the French service a large number of the personnel engaged on duties in connection with the Air Service are borne

on the military and naval establishments, and it is not possible to give corresponding figures, but the percentage of flying in relation to ground personnel is probably much the same as in the Royal Air Force.

Recruiting Advertisements

MR. BECKETT asked the amount spent in the six months ending March 31 in recruiting advertisements?

Sir S. Hoare: The approximate expenditure in respect of the period referred to is £1,620.

Mr. PALING: Are we getting the necessary number of recruits?

Capt. Gee: Will the right hon. gentleman consider the advisability of doubling this amount in order that men may realise the desirability of fighting for their country?

Sir S. Hoare: I will consider my hon. and gallant friend's suggestion, but I would like to point out that the recruiting figures so far are not unsatisfactory.

Irish Free State and Killeagh Aerodrome

MR. J. BECKETT asked the amount spent on the unfinished aerodrome at Killeagh, Ireland; the progress made before its handing over to the Irish Free State; and its condition when handed over?

Sir S. Hoare: The answer to the first part of the question is £491,476; to the second, that one shed was half finished, another about one-third finished, and the subsidiary buildings and works were nearly completed when the station was transferred by the Admiralty to the Air Ministry in 1919. As regards the last part, no further work was carried out after the transfer above mentioned, but the aerodrome was raided in 1922, when very considerable damage was done to the buildings, and they were consequently in a dismantled condition when handed over to the Irish Free State Government.

Mr. Beckett: When the aerodrome was handed over, did loose property such as steel girders also become the property of the Free State Government, or did we make arrangements for collecting it?

Sir S. Hoare: So far as I remember, everything was handed over to the Free State Government, but I will look into the specific point raised by the hon. member.

Air Minister's Visit to Middle East

MR. SMITHERS asked the Secretary of State for Air whether, in view of the far-reaching importance to the Empire and of future possibilities, he will publish in the form of a White Paper a report of his recent trip during the Easter recess with a sketch map of the ground covered?

Sir S. HOARE: The question of the issue of a White Paper in connection with the recent tour by air of my right hon. friend the Secretary of State for the Colonies and myself in the Middle East is at present under consideration by His Majesty's Government, and in this connection I will bear my hon. friend's suggestion in mind.

Airship Base, India

MR. SPENCER (for MR. VIAN) asked the Secretary of State for Air if the site of the airship base in India for the new 5,000,000 cubic feet State airship has been selected as a result of the visit in January last of the Air Vice-Marshal; if any operations have been started; and if sites for mooring masts in other parts of India have been arranged?

Sir S. Hoare: The answer to the first part of the question is in the affirmative; to the second in the negative. As regards the last part, other sites for mooring masts were examined, but the erection of a mast elsewhere than at Karachi is not contemplated in the first experimental stage.

Lieut.-Commander Kenworthy: Besides the mast at Karachi, will there be any intermediate mast in Egypt, Palestine or anywhere else?

Sir S. Hoare: Probably there will be an intermediate mast in Egypt.

Commercial Airship Services

MR. SPENCER (for MR. VIAN) asked if the flights of R.33 has enabled the Air Ministry to form an opinion as to the reliability and safety of airships for commercial service?

Sir S. Hoare: The Air Ministry hope to establish the reliability of commercial airship services, not by means of the flights of any particular ship, such as the R.33, but by a comprehensive programme of experiment and research. The break away of the R.33 has, however, demonstrated that a damaged airship can ride out a storm and return safely to her base, and when this ship has been reconditioned she will carry out a further series of flights for the purpose of obtaining certain essential aero-dynamical and other data affecting design, stresses, &c. Our anticipations as to the reliability and safety of the airship for the operation of commercial services are, I think, justified even on a basis of the experience obtained to date; but I should prefer not to treat the matter as proved until one or more vessels have actually been tried out on a commercial route.

CORRESPONDENCE

SEMI-RIGID v. RIGID

[2096] In regard to the renewed interest in airships, I should like to ask if it be possible for you once more to review the semi-rigid v. rigid position. In your Editorial Comments of August 25, 1921, on the findings of the Imperial Air Communications Committee, you ask "Why Rigid at all? Have we become obsessed by the big rigid?" When one considers how the very real claims of the semi-rigid, as a commercial proposition, have been ignored so persistently by our airship advocates, there can be but one answer to your second question. And now today the designs of our two 5,000,000 cub. ft. "experiments" are well advanced. Whatever new data are forthcoming from the tests being made with the R.33, the incorporation of experimental features can scarcely be avoided, and, unlike that of the Zeppelin Company's, our practical experience in the design and construction of airships is not such as to form a very secure foundation upon which to base these features. However, fools rush in where angels fear to tread, and to the fetish of capacity we sacrifice an excellent prospect of Empire communication, such as that advanced in the continuation of your comments of the same issue (August 25, 1921) and again about a year later—June 22, 1922—utilising a similar ship to the Parseval P.L.27 or Italian N type. A scheme, incidentally, that would cost less money.

Since, however, the cry is "Capacity—and nothing but capacity," cannot we get investigated the possibility of a 5,000,000 cub. ft. semi-rigid? Why should capacity and rigid be synonymous? Eng. Nobile, in his article, "Semi-rigid v. Rigid," January 26, 1922, stated: "We are convinced that to whatever dimensions our T type may be increased—within practical limits—we shall always find that the particular characteristics which constitute its fundamentally good qualities are not only preserved, but even accentuated. . . . When the volume exceeds 3,500,000 cub. ft. the problems of construction and assemblage take on a certain importance, but though these problems may be difficult of solution, they are never such as to lead to unfavourable conditions."

In view of more recent Italian developments, one feels that the whole subject is worthy of our greatest consideration, and as no doubt the co-operation of the Italian designers could be counted on to the full, the experiment would not lack prospects of a fair measure of success.

If it were possible to follow up the lecture given by Dr. Eckener by a contribution by Eng. Nobile, it would give great satisfaction to those who feel that "it is open to discussion whether the world, led by Germany, was right in deciding in favour of the rigid type of ship."

There is consolation, however, in the fact that one country, not unimportant in engineering skill, has faith in the semi-rigid—a country, unfortunately, whose financial position limits the rate of progress.

W. SWANN

Birmingham.

LIGHT PLANES

[2097] We have been experimenting for some time with a view to the formation of a club using light aircraft only.

Referring to the development of light aeroplanes, we note with dismay that the low-powered machines of the Lympne competitions, which must at least be said to have given encouraging results, appear to be in grave danger of being superseded by high-power machines which are almost on a par with the standard training machines.

Since pre-War machines flew well with engines that in most cases did not exceed 50 h.p., it is surely possible for machines of modern design, in conjunction with the more efficient engines of today to fly with ample margins as a single or two-seater on 12 h.p. or less.

This is, in any case, still our opinion, and an opinion we are prepared to back in a practical manner by the formation of a club as aforesaid, devoted solely to light aircraft.

You may be interested to learn that we are constructing a machine on the above basis, which we hope to complete by the summer. We should much appreciate your kindness if you could insert a few lines in your light aeroplane column to the effect that we wish to get into touch with any interested persons in our vicinity as we are now making arrangements for a flying ground, and hope to be in a position to commence shortly.

As regards light 'planes, there are probably many who agree with us that the method adopted of calling heavy "light" is not the final solution of the light 'plane problem.

GNAT AERO AND MOTOR CO.

Portslade,
Sussex.

SIDE-WINDS

WE understand that Mr. K. S. Murray, M.I.Mech.E., who has been for many years the managing director of the British Oxygen Co., has been elected to the chairmanship of that company, which has been rendered vacant by the death of Mr. E. B. Ellice Clark, M.Inst.C.E. Mr. Murray will, for the present, continue also to discharge the duties of managing director. This appointment will be regarded as eminently suitable by all who in any way are conversant with the history of the British Oxygen Company.

WE are informed that Col. W. A. Bristow, consulting aeronautical engineer, has moved from 104, High Holborn to more convenient offices at 39, Grosvenor Place, Westminster, S.W. 1. A well-equipped chemical and physical laboratory is also being set up here for purposes of research. Furthermore, the department dealing with the designing and technical work for the Sumet Metal Corporation, Ltd., will be housed in the same building, and Maj. Howard M. Whitley, A.M.I.C.E., has been appointed to take charge of this work. The new telephone number is Franklin 6540, and the telegraphic address is "Sinecos, Sowest, London."

COL. M. DI PINEDO, Chief of Italian Air Staff, who has just reached Australia from Rome in a Savoia S.16 ter flying boat fitted with a 400 h.p. Lorraine-Dietrich engine, has cabled Messrs. C. G. Wakefield and Co., Ltd., saying: "Arrived motor excellent condition Wakefield Castrol giving every satisfaction."

Institution of Aeronautical Engineers' Visit to Croydon

ON Saturday, June 6, members of the Institution of Aeronautical Engineers will, at the invitation of Imperial Airways, Ltd., pay a visit to Croydon Aerodrome. Members will assemble at the entrance to the aerodrome at 3 p.m.

PUBLICATIONS RECEIVED

Dominion of Canada Report on Civil Aviation, 1924. Department of National Defence, Dominion of Canada, Ottawa, Canada. Price 25 cents.

An Introduction to Fluid Motion. By W. N. Bond. Edward Arnold and Co., 41 and 43, Maddox Street, London, W.1. Price 5s. net.

Cours d'Aviation Destine aux Eleves-Pilotes et Mecaniciens. By A. Desaleux. Gauthier-Villars et Cie., 55, Quai des Grands-Augustins, Paris. Price 35 fr.; postage 2 fr. 25 c.

"The Lighter Way." William Mills, Ltd., Atlas Aluminium Works, Grove Street, Birmingham.

AERONAUTICAL PATENT SPECIFICATIONS

Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

APPLIED FOR IN 1924

Published June 4, 1925

3,240. SPERRY GYROSCOPE CO. Launching devices for aeroplanes, aerial torpedoes, etc. (233,425.)

APPLIED FOR IN 1925

Published June 4, 1925.

7,811. AERO MOTOR-U. AUTO ZUBEHOR AKT.-GES. Searchlight projector. (233,644.)

FLIGHT

The Aircraft Engineer and Airships

36, GREAT QUEEN STREET, KINGSWAY, W.C. 2.

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